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No. 99-095

IN THE
Supreme Court of the United States

EXCEL COMMUNICATIONS, INC.,
EXCEL COMMUNICATIONS MARKETING, INC.,
AND EXCEL TELECOMMUNICATIONS, INC.,
Petitioners,

v.

AT&T CORP.,
Respondent.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

RESPONDENT'S BRIEF IN OPPOSITION

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QUESTION PRESENTED

Whether the court of appeals erred in concluding that a patent claim expressly limited to an electronic process for generating an enhanced message record—a specific, tangible, and useful electronic data structure that records information concerning a particular long-distance telephone call—claims a "new and useful process" and therefore involves subject matter that is patentable under 35 U.S.C. § 101.

CORPORATE DISCLOSURE STATEMENT

Pursuant to Supreme Court Rule 29.6, AT&T Corp. has no parent corporation. No publicly held company owns 10% or more of AT&T Corp.'s stock.

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RESPONDENT'S BRIEF IN OPPOSITION

AT&T Corp. ("AT&T") respectfully submits this brief in opposition to the petition for a writ of certiorari filed by Excel Communications, Inc. and others (collectively "Excel"). The decision below was an interlocutory, correct, and fact-specific application of the standard for patentable subject matter set forth in *Diamond* v. *Diehr*, 450 U.S. 175 (1981). Accordingly, this Court should deny the petition.

First, contrary to Excel's representations, this case does not involve, and the Federal Circuit therefore did not uphold, patent claims directed to "pure processes of manipulating data according to mathematical formulas." (Pet. 1.) Rather, each of the patent claims at issue

recites an electronic process for generating an enhanced message record, a specific electronic data structure that is useful to an interexchange telecommunications carrier because it records information about individual long-distance telephone calls. The court of appeals correctly applied the *Diehr* standard to the specific invention claimed in the patent, and concluded that "on its face the claimed process comfortably falls within the scope of § 101." (Pet. App. 13a.) Second, Excel's focus is on a supposed change in circuit law, a matter that does not ordinarily warrant review by this Court. Moreover, this case would not be a proper vehicle for such review in any event because, even if the court of appeals had applied Excel's preferred "*Freeman-Walter-Abele* test," Excel still would not have prevailed. This is so because the claimed invention includes the physical process steps required under the *Freeman-Walter-Abele* formulation of the § 101 standard. Finally, the current interlocutory posture of the case militates against this Court's review. The court of appeals ruled on Excel's motion for summary judgment. On remand from the court of appeals, the district court has ordered the case to trial on November 1, 1999. The issues to be tried include Excel's additional invalidity defenses, as well as AT&T's claims of infringement. As a result, the question that Excel now poses for review may well become moot. Therefore, the Federal Circuit's decision does not present any question worthy of review.

COUNTERSTATEMENT OF THE CASE

Excel's statement of the case contains a number of misleading statements. Three specific corrections are necessary for present purposes: First, AT&T's patent does *not* contain claims drawn to "pure processes of manipulating data according to mathematical formulas or algorithms."

(Pet. 1.) Rather, the claims recite physical processes for generating specific enhanced message records, electronic data structures representing individual long-distance telephone calls that aid in billing such calls and thus are useful to telecommunications firms that provide long-distance service. Contrary to Excel's representations, the product of the patented processes is not the solution to a mathematical problem, but a tangible, electronically-generated data structure that represents the physical event of a specific long-distance telephone call. Second, the Federal Circuit neither "adopted a new standard that dramatically expands the scope of patentable subject matter," nor applied a test "which requires no more than some practical usefulness of the result of [a] mathematical manipulation." (*Id.*) Instead, after a thorough discussion of the standard set forth in *Diamond* v. *Diehr*, 450 U.S. 175, 181-92 (1981), the Federal Circuit applied that standard to the particular patent claims at issue and concluded that each "falls within the scope of § 101." (Pet. App. 6a-12a (discussing *Diehr* standard), 12a-17a (applying *Diehr* standard).) Third, Excel's description of this case's posture is incomplete. Specifically, Excel fails to note that this case is scheduled for trial in November 1999, and that the further proceedings in the case may moot any § 101 issue altogether.

1. The patent at issue here, U.S. Patent No. 5,333,184 ("the '184 patent"), relates to the creation of a specific type of electronic data structure—a "message record"—that is useful to firms that provide long-distance telephone service. (Pat. Doc. App. 1 (stating that the claimed invention "relates to the generation of message records for long-distance—or so-called interexchange—calls," which are enhanced by "the addition of a primary interexchange carrier (PIC) indicator").) In order to appreciate the concreteness of the processes as actually

described and claimed in the '184 patent, it is useful to review some basic facts about the telecommunications system for which the claimed invention was developed. Figure 1 of the '184 patent illustrates the basic "equal access" telecommunications system within which the claimed invention operates (*id.* at 2), and the specification of the '184 patent explains the operation of the claimed process in detail (*id.* at 7-9).

Both local and long-distance telephone services were transformed following AT&T's 1984 divestiture of its local telephone companies. What had been a largely unitary system was split into two connected parts: (1) local exchange carriers, or "LECs," which provide local telephone service and access to long-distance telephone service, and (2) interexchange carriers, or "IXCs," which provide long-distance telephone service. (Pet. App. 2a-3a). As a result of the divestiture, telephone customers now obtain service from at least two providers—a LEC and an IXC. (Pat. Doc. App. 7 (col. 1, lines 30-50).) Within this two-provider framework, which is predicated on the customer's equal access to IXCs for direct-dialed long-distance calls (1 + area code + number), each customer chooses a primary interexchange carrier, or PIC. The LEC then sends a customer's direct-dialed long-distance calls to the facilities used by that customer's preselected PIC, over which the calls are automatically routed. (*Id.* at 7 (col. 1, lines 35-45); Pet. App. 3a.)[1]

In this system, when a customer places a long-distance call by dialing "1" plus the area code and number, the call is first transmitted over the LEC's network to one

[1] For example, when a newly-arrived resident of Washington, D.C. obtains local telephone service from Bell Atlantic, she also preselects a particular long-distance carrier (*e.g.*, AT&T, MCI, Sprint, etc.) to be her PIC.

of the LEC's switches. The LEC switching equipment that connects the caller to the local telephone network identifies the caller's PIC through the use of an internal database. Once the LEC's facilities have identified the caller's PIC, the call is automatically routed over the interexchange facilities that handle the traffic of that PIC. The call is carried over the facilities used by the caller's PIC—*i.e.*, the cable, fiber optic lines, microwave facilities, and interexchange switches—to the local exchange carrier that serves the called party. The terminating LEC then delivers the call over its local network to the called party. (Pat. Doc. App. 7-8 (cols. 1-3); Pet. App. 3a.) It is plain, then, that many long-distance calls made in the equal access telecommunications system involve three separate carriers: the originating LEC, the terminating LEC, *and* an IXC. This is the "telecommunications system" in which the processes claimed in the '184 patent were invented to operate. (Pat. Doc. App. 10-12 (claiming "method[s] for use in a telecommunications system").)

During a long-distance call, a switch (which may be a switch in the interexchange network) monitors and records data about the call. For each completed call, the switch generates an electronic data structure known generally in the industry as a "message record."[2] The message record contains data fields for specific information, such as the duration of the call, and the message record

[2] Excel conceded in the district court, in a glossary that it created of technical terms used in the patent, that a "message record" is "[a]n electronically generated record having fields that contain Information used when billing charges for Long-Distance telephone calls." (Resp. App. 2a.) Excel also conceded that "generating a message record," as claimed in the patent, entails "electronically producing a record of the characteristics of that call" by means of a "[s]witch." (*Id.*; *see also* Pet. 3 (message record is an "electronic record" of a long-distance call "generated by the switch for later billing or other purposes").)

physically organizes the data that represent a particular long-distance telephone call in a manner that enables subsequent operations that are conducted by an IXC (such as rating and billing the call) to be conducted with greater efficiency. (Pat. Doc. App. 7 (col. 1, lines 10-14); Pet. App. 3a.) "Because the message records are stored in electronic format, they can be transmitted from one computer system to another and reformatted to ease processing of the information." (Pet. App. 3a.) Figure 2 of the '184 patent represents the fields contained in one type of electronic message record for an interexchange call—namely, a message record that has been enhanced by the addition of the PIC indicator of the claimed invention. (Pat. Doc. App. 3.)

In the processes claimed in the '184 patent, the switches, computers, and other equipment in the telecommunications system generate an *enhanced* message record. As the Federal Circuit explained, "[t]he invention of the '184 patent calls for the addition of a data field into a standard message record to indicate whether a call involves a particular PIC (the 'PIC indicator')." (Pet. App. 4a.) The enhanced message record's PIC indicator is a physical representation within the new electronic data structure of whether, for a particular long-distance call, the called party has selected a predetermined long-distance company as his or her PIC. The Federal Circuit summarized the matter as follows: "AT&T's claimed process employs subscribers' and call recipients' PICs as data, applies Boolean algebra to those data to determine the value of the PIC indicator, and applies that value through switching and recording mechanisms *to create a signal useful for billing purposes*." (*Id.* at 12a (emphasis added).) Before the invention claimed in the '184 patent, this representation was not part of an interexchange message record

structure, nor was the supporting database architecture and software designed to make the underlying information it represents readily accessible to IXCs.

Excel repeatedly attempts to disparage the claims of the '184 patent as "pure method claims" (see, *e.g.*, Pet. 5) and "pure process claims" (see, *e.g.*, *id.* at 10), slogans that Excel has coined for its petition. From the outset, Excel mischaracterizes the claimed processes as "method[s] of manipulating data according to a mathematical operation" (*id.* at i)—specifically, formulae from "Boolean mathematics" (*id.* at 4), which Excel likens to such abstract concepts as the Pythagorean Theorem (*id.* at 25). Excel simply ignores the fact that each of the claimed processes expressly requires, among other things, a particular "interexchange call[]." (Pat. Doc. App. 10-12.) In the absence of a specific interexchange call, the claimed processes could not be performed. Indeed, they would make no sense. There can be no message record, no PIC indicator, and no billing without a particular long-distance call. Nor can Excel reasonably deny that an interexchange call is a physical event that takes place in physical telecommunications facilities; the '184 patent describes these very sorts of facilities. (*Id.* at 7-9.) And, as noted above (p. 5 n.2), Excel conceded below that a message record, the product of the processes claimed in the '184 patent, is electronically generated by the switches, computers, and other equipment and facilities used by interexchange telephone carriers. In short, the claimed processes employ physical, electronic steps to transform physical events—specific long-distance telephone calls—into different physical things—enhanced electronic message records that represent those calls.

2. Excel's primary complaint is that the Federal Circuit has changed its own articulation of the standard for patentability under § 101.

Even a cursory reading of the Federal Circuit's decision reveals that the court's rearticulation was made specifically to comply with this Court's precedents and to provide a more workable standard for the lower courts than that provided in prior Federal Circuit decisions. After reviewing the specifics of the inventions claimed in the '184 patent (Pet. App. 2a-5a), the court of appeals began with the language of 35 U.S.C. § 101 and this Court's broad construction of that provision in *Diamond* v. *Chakrabarty*, 447 U.S. 303 (1980), and *Diamond* v. *Diehr*, 450 U.S. 175 (1981). (Pet. App. 6a-7a.) Mindful that "[a] mathematical formula alone, sometimes referred to as a mathematical algorithm, viewed in the abstract, is considered unpatentable subject matter" (*id.* at 7a (citing *Diehr*, *Parker* v. *Flook*, 437 U.S. 584 (1978), and *Gottschalk* v. *Benson*, 409 U.S. 63 (1972)), the Federal Circuit surveyed some of the changes in its own case law since the late 1960s as the Patent and Trademark Office ("PTO") responded to the fact that "the process of manipulation of numbers is a fundamental part of computer technology." (*Id.* at 8a-9a; see also *id.* at 14a-17a.) Importantly, the Federal Circuit expressly recognized that, in *Diehr*, this Court "supported and enhanced this effort." (*Id.* at 9a (discussing facts, reasoning, and conclusion of *Diehr*).)[3] In light of all the case law, including its own decisions in *State Street Bank & Trust Co.* v. *Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999), and *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994) (in banc), the court of appeals concluded that § 101 "requires an examination of the contested claims to see if the claimed subject matter

[3] Thus, the "sea-changes" in law and technology that the Federal Circuit described in its opinion (Pet. App. 8a) referred, not to its decision in this case, as Excel mistakenly asserts (Pet. 2), but to a series of developments from the 1960s to the present, including this Court's decision in *Diehr* (*see* Pet. App. 8a-9a).

as a whole is a disembodied mathematical concept representing nothing more than a 'law of nature' or an 'abstract idea,' " in which case it is not patentable, "or if the mathematical concept has been reduced to some practical application rendering it 'useful,' " in which case it is patentable. (Pet. App. 11a.)

The court of appeals then conducted this required examination with respect to AT&T's claims to processes for generating an enhanced electronic message record. The court squarely rejected Excel's contention that the claimed processes were nothing more than mathematical formulae, recognizing that the processes claimed in the '184 patent use "switching and recording mechanisms to create a signal useful for billing purposes." (Pet. App. 12a.) Accordingly, the court unanimously held that the claimed processes easily pass muster under § 101:

> In this case, Excel argues, correctly, that the PIC indicator value is derived using a simple mathematical principle (p and q).[4] But that is not determinative because AT&T does not claim the Boolean principle as such or attempt to forestall its use in any other application. It is clear from the written description of the '184 patent that AT&T is only claiming a process that uses the Boolean principle in order to determine the value of the PIC indicator. The PIC indicator represents information about the call recipient's PIC, a useful, non-abstract result that

[4] AT&T disagrees with this description of this process step. The comparative operations that the claimed processes include, whether or not they can be termed "Boolean algebra," are not the type of mathematical formulae that have been excluded from patent protection. In *Gottschalk* v. *Benson*, this Court defined the excluded type of algorithm as "[a] procedure for solving a given type of mathematical problem." 409 U.S. 63, 65 (1972). The comparisons executed as steps in the processes claimed in the '184 patent do not involve a procedure for solving a mathematical problem.

> facilitates differential billing of long-distance calls made by an IXC's subscriber. Because *the claimed process applies the Boolean principle to produce a useful, concrete, tangible result* without pre-empting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of § 101.

(*Id.* at 12a-13a (emphasis added).) The Federal Circuit thus embraced, rather than repudiated, *Diehr*. Indeed, the similarity in analysis is striking. See *Diehr*, 450 U.S. at 187 ("Their process admittedly employs a well-known mathematical equation, but they do not seek to pre-empt the use of that equation. Rather, they seek only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process [for curing rubber].").

3. Excel's statement of the case is incomplete in another crucial respect. Specifically, Excel does not acknowledge that the Federal Circuit's decision is purely interlocutory. The Federal Circuit reversed the district court's grant of summary judgment in Excel's favor in April 1999. (Pet. App. 1a.) In June 1999, approximately one month before Excel filed the petition, the district court ordered that this case go to trial beginning on November 1, 1999. (Resp. App. 1a, ¶ 4.) The issues to be tried include infringement and Excel's remaining invalidity contentions. These further proceedings may render moot the § 101 issue presented in the petition.

REASONS FOR DENYING THE PETITION

The court of appeals' decision, viewed accurately, does not warrant review by this Court.

1. The question Excel poses—whether "a method of manipulating data according to a mathematical operation constitutes a patentable process" (Pet. i)—is simply not

presented in this case. Indeed, in order to pose such a question, Excel is forced to distort beyond recognition both the invention that is claimed in the patent in suit and the Federal Circuit's reasoning and conclusion upholding the claimed invention's patentability under 35 U.S.C. § 101, *supra* pp. 3-10. However, the claimed processes for electronically generating specific enhanced message records that correspond to particular long-distance telephone calls in an equal access telecommunications system were properly understood by the Federal Circuit under a faithful application of the standard of § 101 patentability laid down in *Diamond* v. *Diehr*, 450 U.S. 175 (1981), and its predecessors.

a. Section 101 of the Patent Act expressly extends patent protection to, among other things, "*any* new and *useful* process." 35 U.S.C. § 101 (emphasis added). As this Court explained in both *Diamond* v. *Chakrabarty*, 447 U.S. 303, 309 (1980), and *Diehr*, 450 U.S. at 182, "any" is an expansive term that encompasses " 'anything under the sun that is made by man.' " (Quoting S. Rep. No. 82-1979, at 5 (1952); H.R. Rep. No. 82-1923, at 6 (1952).) Moreover, "in dealing with the patent laws," this Court has "more than once cautioned that 'courts "should not read into the patent laws limitations and conditions which the legislature has not expressed." ' " *Diehr*, 450 U.S. at 182 (quoting *Chakrabarty*, 447 U.S. at 308).

In *Diehr*, this Court confronted the question "whether a process for curing synthetic rubber which includes in several of its steps the use of a mathematical formula and a programmed digital computer is patentable subject matter under 35 U.S.C. § 101." 450 U.S. at 177. The Court concluded that the inventors' 11 process claims, each of which expressly recited a mathematical formula for calculating the curing time for rubber known as "the Arrhenius equation," *id.* at 177, 179 n.5, were patentable under § 101.

After reviewing the broad language of § 101 and its decision on the scope of § 101 in *Chakrabarty* from the previous Term, *id.* at 181-84, the Court distilled its prior holdings: "Excluded from such patent protection are laws of nature, natural phenomena, and abstract ideas." *Id.* at 185; see also *Chakrabarty*, 447 U.S. at 309 ("Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity."). Conversely, "when a claim containing a mathematical formula implements or applies that formula in a structure *or process* which, when considered as a whole, is performing a function which the patent laws were designed to protect (*e.g.*, transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101." *Diehr*, 450 U.S. at 192 (emphasis added). Put another way, "an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." *Id.* at 187.

The Court concluded that, in view of the foregoing principles, the claimed rubber-curing process constituted patentable subject matter. The Court reasoned as follows:

> [T]he respondents here do not seek to patent a mathematical formula. Instead, they seek patent protection for a process of curing synthetic rubber. Their process admittedly employs a well-known mathematical equation, but they do not seek to pre-empt the use of that equation. Rather, they seek only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process. These include installing rubber in a press, closing the mold, constantly determining the temperature of the mold, constantly recalculating the appropriate cure time through the use of the formula and a digital computer, and automatically opening

> the press at the proper time. Obviously, one does not need a "computer" to cure natural or synthetic rubber, but if the computer use incorporated in the process patent significantly lessens the possibility of "overcuring" or "undercuring," the process as a whole does not thereby become unpatentable subject matter.

Id.; see also *id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Likewise, in this case, the Federal Circuit correctly viewed AT&T's claimed invention as a process for generating enhanced electronic message records for long-distance telephone calls and not as an attempt to patent a mathematical formula.

b. The Federal Circuit's decision in this case is neither "a sharp break from the pre-existing law" (Pet. 15) nor "a repudiation of this Court's precedents" (*id.* at 18). Indeed, in language that tracks this Court's precedents virtually verbatim, the court of appeals applied the *Diehr* standard to the particular claims of the '184 patent and concluded that the claimed processes fall well within the definition of patentable subject matter. As noted above, the Federal Circuit upheld the patentability of the claims of the '184 patent only after concluding that the specific claimed processes were sufficiently concrete and "useful" to warrant patent protection. Contrary to Excel's contention that the claims recite nothing but mathematical formulae, the Federal Circuit specifically recognized that the claimed processes use "switching and recording mechanisms to create a signal useful for billing purposes." (Pet. App. 12a.) Next, the Federal Circuit, echoing this Court's analysis in *Diehr*, "focuse[d] on whether the mathematical algorithm" it found recited in the claims "is applied in a practical manner to produce a useful result."

(*Id.* at 16a.) According to the Federal Circuit, "AT&T does not claim the Boolean principle as such or attempt to forestall its use in any other application." (*Id.* at 13a.) Rather, "[b]ecause *the claimed process applies the Boolean principle to produce a useful, concrete, tangible result* without pre-empting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of § 101." (*Id.* (emphasis added).) Again, the court of appeals' standard is essentially indistinguishable from that set forth in *Diehr*, 450 U.S. at 187.

Excel devotes considerable attention to the Federal Circuit's discussion of the "physical transformation" aspect of this Court's decision in *Diehr*, contending that the court of appeals discarded it as an element of the § 101 analysis. (Pet. 19-24.)[5] This Court will search the Federal Circuit's opinion in vain for the "repudiation" (*id.* at 22 n.11) claimed by Excel. To the contrary, the Federal Circuit cited its decision in *Arrhythmia Research Tech., Inc.* v. *Corazonix Corp.*, 958 F.2d 1053, 1058-61 (Fed. Cir. 1992), to explain that the transformation of electrical signals from one form into another can produce the useful, concrete, tangible result required for patentability under this Court's precedents. (Pet. App. 14a.) And, as noted above, the Federal Circuit, employing the *Diehr* analysis, correctly held that the claimed processes in this case effected the same sort of transformation, using "switching and recording mechanisms to create a signal useful for billing purposes" (*id.* at 12a).

[5] Excel, curiously, bases this contention on the Federal Circuit's description of physical transformation as an example, rather than an unvarying requirement, of a practical application of a mathematical algorithm. (Pet. 22 n.11.) Excel ignores the fact that this Court itself used this characterization in *Diehr*. *See* Pet. App. 13a-14a (quoting *Diehr*, 450 U.S. at 192); *see also Benson*, 409 U.S. at 71 (Court declines to hold that a process must change materials to a different state or thing to be patentable).)

Nor did the court of appeals disregard this Court's decisions in *Benson* and *Flook*, as Excel repeatedly asserts. To the contrary, the Federal Circuit cited both cases, along with *Diehr*, for the bedrock proposition that "[a] mathematical formula alone, sometimes referred to as a mathematical algorithm, viewed in the abstract, is considered unpatentable subject matter." (Pet. App. 7a.) Indeed, the Federal Circuit described *Benson* and *Flook* in the exact terms used by this Court in *Diehr*: "these cases did no more than confirm the 'long-established principle' that laws of nature, natural phenomena, and abstract ideas are excluded from patent protection." (*Id.* at 9a (quoting *Diehr*, 450 U.S. at 185); *Diehr*, 450 U.S. at 185 ("Our recent holdings in *Gottschalk* v. *Benson*, *supra*, and *Parker* v. *Flook*, *supra*, both of which are computer-related, stand for no more than these long-established principles.").) In contrast to the inventions claimed in the patents at issue in *Diehr* and in this case, in which mathematical algorithms are employed as part of a larger process to produce "a useful, concrete, tangible result" (Pet. App. 13a), this Court understood the inventions in *Benson* and *Flook* to involve nothing more than methods of mathematical calculation. See *Benson*, 409 U.S. at 71-72 (patent would cover a "formula for converting BCD numerals to pure binary numerals" and thus would "wholly pre-empt the mathematical formula"); *Parker* v. *Flook*, 437 U.S. 584, 594-95 (1978) (patent application "simply provides a new and presumably better method for calculating alarm limit values").[6] Excel is thus wrong to contend that the standard applied by the Federal Circuit in this case would have resulted in different outcomes in *Benson* and *Flook*. (Pet. 20.) Both *Benson* and

[6] *See also Diehr*, 450 U.S. at 185 (*Benson* claims covered "an algorithm used to convert binary code decimal numbers to equivalent pure binary numbers"); *id.* at 186 (*Flook* application "sought to protect a formula for computing this [alarm limit] number").

Flook applied the same standard articulated by this Court in *Diehr*: mathematical formulae as such are not patentable, 450 U.S. at 191, but claims that apply such formulae in processes that perform a function that the patent laws were designed to protect satisfy the threshold requirements of § 101, *id.* at 192.

In short, the court of appeals' decision in this case, far from treating this Court's precedents "as effectively defunct" (Pet. 23), faithfully implements the standard established in *Diehr* and its predecessors. Much as Excel strains to deny it, there is nothing new in the decision below.

c. Excel's real complaint appears to be that, in a case decided over a year ago, *State Street Bank & Trust Co.* v. *Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999), the Federal Circuit set aside an awkward and confusing formulation of the § 101 inquiry known as the "*Freeman-Walter-Abele* test." *See State Street*, 149 F.3d at 1373-75 (explaining origin of and confusion caused by the test). The test is named for the three cases in which the Federal Circuit's predecessor, the U.S. Court of Customs and Patent Appeals, developed the analysis. The test was also applied by the Federal Circuit in *In re Grams*, 888 F.2d 835 (Fed. Cir. 1989), and *In re Schrader*, 22 F.3d 290 (Fed. Cir. 1994), as well as other cases.[7] (Pet. 12-18.) Excel devotes a substantial portion of its argument to the point, bemoaning the *State Street* decision throughout its petition. But Excel's complaint does not justify certiorari review because, as explained below, the court of appeals would

[7] Although Excel asserts (Pet. 12-18) that the decision below represents a dramatic break with the Federal Circuit's pre-1998 precedent—including, presumably, its *in banc* decision in *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994)—Excel did not seek *in banc* review in this case.

have concluded that the claimed invention is patentable subject matter even under the *Freeman-Walter-Abele* test that Excel apparently would have this Court adopt. *Infra* pp. 21-22. Moreover, Excel's argument trades on the untenable premise that the Federal Circuit should not be permitted to improve the manner in which it implements this Court's precedents by eliminating confusion in its own case law. This is not the law, nor should it be.

The *Freeman-Walter-Abele* test has never been adopted by this Court. As the Federal Circuit explained in *State Street*, it "was designed by the Court of Customs and Patent Appeals . . . to extract and identify unpatentable mathematical algorithms" from patent claims in an effort to identify unpatentable subject matter. 149 F.3d at 1373-74. But "[t]he test has been a source of much confusion." *Id.* at 1374 n.5. The confusion is not surprising, for the *Freeman-Walter-Abele* test's reliance on "extract[ion]" is at odds with *Diehr*'s unmistakable command that, "[i]n determining the eligibility of [one's] claimed process for patent protection under § 101, [the] claims *must be considered as a whole*." 450 U.S. at 188 (emphasis added). As the Federal Circuit explained in *State Street*,

> [t]he dispositive inquiry is whether the claim as a whole is directed to statutory subject matter. It is irrelevant that a claim may contain, as part of the whole, subject matter which would not be patentable by itself. "A claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula, computer program or digital computer."

149 F.3d at 1374 n.6 (quoting *Diehr*, 450 U.S. at 187). *State Street* simply returned to the touchstone of *Diehr* itself. This case simply applied *State Street*. (Pet. App. 15a.)

In the course of discussing *State Street*, Excel devotes considerable energy to an untenable attempt to es-

tablish that different patentability standards govern machines and processes. (Pet. 13-15, 18 & n.9.) But § 101 on its face treats all categories of patentable subject matter in the same fashion. 35 U.S.C. § 101 ("any new and useful process, machine, manufacture, or composition of matter"). This Court has done so as well. See, *e.g.*, *Diehr*, 450 U.S. at 192 ("a *structure or process* which, when considered as a whole, is performing a function which the patent laws were designed to protect") (emphasis added); *Benson*, 409 U.S. at 67-68 ("the same principle applies" to product and process claims). Indeed, any other interpretation of § 101 would make the patentability of an invention turn on the skill of the application's drafter rather than the substance of the invention. See *In re Johnson*, 589 F.2d 1070, 1077 (C.C.P.A. 1978) (the form of a claim, whether apparatus or process, "is often an exercise in drafting").

Excel also inexplicably criticizes the Federal Circuit's emphasis on whether or not the claimed invention, viewed as a whole, recites a "useful" process rather than an abstract idea. But Congress, not the Federal Circuit, wrote the criterion "useful" into § 101. In doing so, Congress tracked the Constitution's grant of the power to "promote the . . . useful Arts," U.S. Const. art. I, § 8, cl. 8, a tradition that dates to Thomas Jefferson's Patent Act of 1793, which defined statutory subject matter as "any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement" thereof. Act of Feb. 21, 1793, § 1, 1 Stat. 319; see *Chakrabarty*, 447 U.S. at 308-09 (discussing history of 35 U.S.C. § 101). "In 1952, when the patent laws were recodified, Congress replaced the word 'art' with 'process,' but otherwise left Jefferson's language intact." *Id.* at 309. To determine whether a new process produces a "useful" result is fully consistent with the statute, the Constitution, and *Diehr*. That is the bedrock of patentability.

d. Excel attempts to heighten the significance of this case by lamenting the increasing number of "software" patents issued by the PTO (Pet. 25). Not only are Excel's concerns misplaced, but they have nothing to do with this case and provide no justification for review by this Court.

First, the causal link Excel attempts to draw is nonexistent. According to Excel, "[t]he *State Street* decision 'appears to have set off a stampede to the patent office, which reports a 45 percent increase in the number of data processing and computer-related patents issued during its 1998 fiscal year, which ended on Sept. 30.'" (Pet. 25 (quoting John T. Aquino, *Patently Permissive*, A.B.A. J., May 1999, at 30, 30).) But as of fiscal year 1998, the PTO took an average of 27.8 months to grant a patent application in the "Communications and Information Processing" area. FY 1998 U.S. PTO Ann. Rep. 94 (Table 4). In other words, any patents that issued between the end of July 1998, when the Federal Circuit decided *State Street* (see 149 F.3d at 1368), and the September 30, 1998 PTO fiscal year-end were applied for long before the *State Street* decision. Indeed, the specific Internet-related patent that Excel disparages at page 28 of its petition, U.S. Patent No. 5,794,207, was applied for in September 1996, *i.e.*, approximately two years before *State Street*, and issued in August 1998.[8] The patent at issue in *State Street* itself (U.S. Patent No. 5,193,056) was applied for in March 1991 and issued in March 1993. Similarly, the patent in suit was applied for in May 1992 and issued in July 1994 (Pat. Doc. App. 1). And, just last Term this Court considered a case involving U.S. Patent No. 4,722,055, a computer-related patent with claims drawn to both processes and machines for funding

[8] The patents referenced above can be reviewed using the PTO's full-text patent database at http://www.uspto.gov/patft/index.html.

a future liability by means of an insurance investment program. See *College Sav. Bank* v. *Florida Prepaid Postsecondary Educ. Expense Bd.*, 148 F.3d 1343, 1345 (Fed. Cir. 1998), *rev'd*, 119 S. Ct. 2199 (1999). That patent was applied for in February 1987, *more than a decade* before the Federal Circuit's decision in *State Street*. In short, there is no causal link between the Federal Circuit's recent § 101 decisions and the supposed surge in the number of computer-related patents.

Second, even if the Federal Circuit's decision in *State Street* or this case were to cause an increased number of patent applications to be filed for computer-related inventions, that would not be a cause for alarm, much less certiorari. Whatever else computer-related patents may be, they are not new arrivals. Although Excel suggests that the patentability of "software" is an issue for Congress, Congress has already spoken in favor of broad protection for "any new and useful process," 35 U.S.C. § 101.

In sum, neither the case at bar nor *State Street* is evolutionary, much less—as Excel would have it—revolutionary. Rather, in both decisions the Federal Circuit has followed the path this Court laid out in *Diehr* and its predecessors, concluding that the particular inventions at issue in each case constitute patentable subject matter under § 101. To the extent the Federal Circuit may have enhanced its fidelity to *Diehr* by clarifying its formulation of the § 101 standard, that is a "refinement" of the type this Court has left to the Federal Circuit's "sound judgment in this area of its special expertise." *Warner-Jenkinson Co.* v. *Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997) (declining to "micromanag[e] the Federal Circuit's particular word choice for analyzing" equivalent infringement under the doctrine of equivalents).

2. This case is not a proper vehicle for a retreat to the *Freeman-Walter-Abele* test, in any event, because the patent claims at issue would survive under that test as well.

Under the *Freeman-Walter-Abele* test, compliance with § 101 is determined according to a two-step analysis that first dissects, then reunites, the mathematical and physical portions of a patent claim as follows:

> First, the claim is analyzed to determine whether a mathematical algorithm is directly or indirectly recited. Next, if a mathematical algorithm is found, the claim as a whole is further analyzed to determine whether the algorithm is "applied in any manner to physical elements or process steps," and, if it is, it "passes muster under § 101."

In re Pardo, 684 F.2d 912, 915 (C.C.P.A. 1982) (quoting *In re Walter*, 618 F.2d 758, 767 (C.C.P.A. 1980)). In this case, the Federal Circuit concluded that the PIC indicator that is used to enhance the electronic message record in the claimed process "is derived using a simple mathematical principle (p and q)." (Pet. App. 12a.) What remains is to determine whether the claimed process, considered as a whole, applies the contained mathematical algorithm in any manner to physical elements or process steps. The processes claimed in the '184 patent clearly pass muster under this step of the *Freeman-Walter-Abele* test.

Each of the claims in suit involves physical process steps that result in a new and useful physical thing—namely, an electronic message record that represents a particular interexchange telephone call with a corresponding indicator that represents, at a minimum, whether the called party has chosen a particular PIC. Therefore, the results of applying the steps recited in each of the asserted claims are not disembodied concepts, but physical proc-

esses that transform individual long-distance telephone calls into long-distance telephone call message records that have been enhanced by a PIC indicator or are otherwise accompanied by an indication of the called party's PIC. (Pet. App. 2a-5a.) Put another way, it is evident that Boolean logical operations or mathematical computations alone, no matter how often repeated, could never produce an electronic message record that represents a specific long distance call, any more than they could produce a piece of cured rubber. As Excel conceded below (see p. 5 n.2 *supra*), an electronic message record, with or without a PIC indicator, can be generated only by physical process steps, using physical facilities, in response to a specific physical event (*i.e.*, a long-distance telephone call). The process of generating such a message record therefore is patentable subject matter.

3. Finally, apart from the merits, Excel's petition is premature because the Federal Circuit's decision is interlocutory. Since the Federal Circuit remanded this case to the district court in April 1999, the parties have continued the pretrial proceedings that were interrupted by the now-reversed summary judgment ruling. The district court, in an order issued approximately one month before Excel filed its petition, ordered that this case go to trial on November 1, 1999. (Resp. App. 1a, ¶ 4.) The issues to be tried include invalidity contentions other than Excel's § 101 defense, as well as AT&T's infringement claims. The trial may moot the § 101 issue and, if it does not, Excel can seek review following entry of a final judgment. See, *e.g.*, *Hughes Tool Co.* v. *Trans World Airlines, Inc.*, 409 U.S. 363, 365 n.1 (1973). Given the current posture of this case, this Court should deny Excel's certiorari petition.

CONCLUSION

For the foregoing reasons, the petition for a writ of certiorari should be denied.

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August 12, 1999

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APPENDICES

APPENDIX A

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

Civil Action No. 96-434 (SLR)

AT&T CORP.,

Plaintiff,

v.

EXCEL COMMUNICATIONS, INC.,
EXCEL COMMUNICATIONS MARKETING, INC.,
and EXCEL TELECOMMUNICATIONS, INC.,

Defendants.

SCHEDULING ORDER

The Court having conducted a telephonic status and scheduling conference on May 11, 1999;

IT IS ORDERED that:

1. No later than October 7, 1999, the parties shall (1) notify the Court of any previously-filed motions in limine that still require determination by the Court and (2) serve and file any additional motions in limine.

2. Responses to any motions in limine filed on October 7 shall be served and filed by October 14, 1999.

3. The final pretrial conference will be held at 4:00 p.m. on October 21, 1999.

4. A jury trial will begin on November 1, 1999.

Date: June 18, 1999 /s/ Sue L. Robinson
United States District Judge

APPENDIX B

(Excerpted from Excel's Summary Judgment Papers in the District Court)

APPENDIX B—GLOSSARY [1]

. . .

*** Generating A Message Record (See also Message Record)**

At the completion of a call, electronically producing a record of the characteristics of that call. A Switch initially generates the Message Record in AMA format. *See* '184 Patent, col. 3, lines 26-28. The AMA formatted Message Record can later be reformatted into an EMI formatted message record. *See* '184 Patent, col. 3, lines 35-41. A Message Record is generated in or adjunct to the Network, but prior to the Message Record being sent to the Billing System prior to billing. *See* '184 Patent, col. 4, lines 44-46; claims 5, 14, and 20; col. 1, lines 26-29.

. . .

*** Message Record**

An electronically generated record having fields that contain Information used when billing charges for Long-Distance telephone calls. This Information may include: the originating telephone number; the terminating telephone number; the billing tellephone number; the start time for the call; the lapsed time of the call; the geographic call origination and termination points; the charge for the call; a PIC indicator (see below) for the call, etc. *See* '184 Patent, col. 1, lines 6-29; col. 3, lines 26-28; col. 3, lines 35-41; col. 3, lines 49-54; col. 3, line 58-col. 4, line 10.

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[1] Asterisked entries are terms found in the '184 patent and are defined according to the Intrinsic Record—Entries with no asterisk are not found in the '184 patent but are helpful in understanding the issues in the case; some Extrinsic Evidence is relied upon to define these entries. Capitalized terms in a definition indicate that that term is also defined in the Glossary.